IN THE SPECIFICATION

Please replace the paragraph starting on page 5, line 1 through page 6, line 10, in its entirety with the following new paragraph.

To solve the above-mentioned subject, a zoom lens of the present invention is made up of a first lens group having positive refracting power, a second lens group having negative refracting power, a third lens group having positive refracting power, and a fourth lens group having positive refracting power, which are disposed in order from an object side, wherein the first lens group and the third lens group are stationary, and the zoom lens performs mainly variable power (zooming) by shifting the second lens group in an optical axis direction, and performs correction for image position fluctuations and focusing by shifting the fourth lens group in the optical axis direction, in which:

the first lens group is composed of five lenses: a concave lens; a convex lens with a strong convexity facing to an image side; a cemented lens made up of a concave lens with a strong concavity facing to the image side, and a convex lens; and a convex lens with a strong convexity facing to the object side, which are disposed in order from the object side, and configured so as to satisfy each of the following respective conditional expressions (1), (2), (3), and (4):

(1) 1.25 < h1-[[1]]4/h1-[[4]]1 < 1.55

(2) d1-2/d1-3 < 0.4

(3) 1.65 < n1-2

(4) 0.1 < H1'/f1 < 0.6

where:

f1 is a focal length of the first lens group;

h1-i is a paraxial ray height in the i-th surface from the object side, when allowing a paraxial ray parallel to an optical axis to enter the first lens group;

d1-i is axial spacing from the i-th surface to the (i+1)-th surface in the first lens group;

n1-i is a refractive index on a d-line of the i-th surface in the first lens group; and

H1' is spacing from a vertex of a surface closest to the image side in the first lens group to an image side principal point in the first lens group ("-" indicates the object side, and "+" indicates the image side).

Please replace the paragraph starting on page 6, line 15 through page 7, line 25, in its entirety with the following new paragraph.

An image pickup apparatus of the present invention comprises: a zoom lens; image pickup means converting an image captured by the zoom lens into an electric image signal; and image control means. The image control means is configured so as to form a new image signal subjected to coordinate conversion by shifting a point on an image defined by an image signal formed by the image pickup means, while referring to a conversion coordinate factor previously provided in response to a variable power rate through the zoom lens, and then output the new image signal. The zoom lens is made up of a first lens group having positive refracting power, a second lens group having negative refracting power, a third lens group having positive refracting power, and a fourth lens group having positive refracting power, which are disposed in order from an object side. The first lens group and the third lens group are stationary, and the zoom lens performs mainly variable power by shifting the second lens group in an optical axis direction, and performs correction for image position fluctuations and focusing by shifting the fourth lens group in the optical axis direction. The first lens group is composed of five lenses: a concave lens; a convex lens with a strong convexity facing to an image side; a cemented lens made up of a concave lens with a strong concavity facing to the image side, and a convex lens; and a convex lens with a strong convexity facing to the object side, which are disposed in order from the object side, and configured so as to satisfy each of the following conditional expressions: (1) 1.25 < h1-[[1]]4/h1-[[4]]1 < 1.55; (2) d1-2/d1-3 < 0.4; (3) 1.65 < n1-2; and (4) 0.1 < H1'/fl < 0.6, where fl is a focal length of the first lens group; h1-i is a paraxial ray height in the i-th surface from the object side when allowing a paraxial ray parallel to an optical axis to enter the first lens group; d1-i is axial spacing from the i-th surface to the (i+1)-th surface in the first lens group; n1-i is a refractive index on a d line of the i-th surface in the first lens group; and H1' is spacing from a vertex of a surface closest to the image side in the first lens group

to an image side principal point in the first lens group ("-" indicates the object side, and "+" indicates the image side).

Please replace the paragraph starting on page 10, line 17 through page 11, line 13, in its entirety with the following new paragraph.

In the zoom lenses 1, 2, 3, and 4, the first lens group Gr1 is made up of five lenses: a concave lens L1; a convex lens L2 with a strong convexity facing to an image side; a cemented lens made up of a concave lens L3 with a strong concavity facing to the image side, and a convex lens L4; and a convex lens L5 with a strong convexity facing to the object side, which are disposed in order from an object side, and satisfies each of the following conditional expressions (1), (2), (3), and (4):

(1) $1.25 < h1\text{-}[[1]]\underline{4}/h1\text{-}[[4]]\underline{1} < 1.55$;

(2) $d1\text{-}2/d1\text{-}3 < 0.4$;

(3) $1.65 < n1\text{-}2$; and

(4) $0.1 < H1'/f1 < 0.6$,

where:

f1 is a focal length of the first lens group;

h1-i is a paraxial ray height in the i-th surface from the object side when allowing a paraxial ray parallel to an optical axis to enter the first lens group;

d1-i is axial spacing from the i-th surface to the (i+1)-th surface in the first lens group;

n1-i is a refractive index on a d-line of the i-th lens in the first lens group; and

H1' is spacing from a vertex of a surface closest to the image side in the first lens group to an image side principal point in the first lens group ("-" indicates the object side, and "+" indicates the image side).

Please replace the paragraph starting on page 29, line 13 through line 26, in its entirety with the following new paragraph.

Next, the values of the respective conditional expressions (1) through (8) in the above numerical value embodiments of the zoom lens 1 are shown in the following.

(1) h1-[[1]]4/h1-[[4]]1 = 1.3485

(2) d1-2/d1-3 = 0.228

(3) n1-2 = 1.83481

(4) H1'/f1 = 0.2477, f1 = 3.953

(5) (n2-1+n2-2)/2 = 1.88300

(6) f3/r3-2 = -0.221, f3 = 4.794

(7) r4+1/r4-3 = -0.9076

(8) r4-2/f4 = 0.4151, f4 = 4.091

The respective values in the numerical value embodiments of the zoom lens 2 according to the second preferred embodiment are presented in Table 4.

Please replace the paragraph starting on page 32, line 14 through page 33, line 7, in its entirety with the following new paragraph.

Next, the values of the respective conditional expressions (1) through (5), (9) and (10) in the above numerical value embodiments of the zoom lens 2 are shown in the following.

(1) h1-[[1]]4/h1-[[4]]1 = 1.4461

(2) d1-2/d1-3 = 0.178

(3) n1-2 = 1.83500

(4) H1'/f1 = 0.3488, f1 = 3.705

(5) (n2-1+n2-2)/2 = 1.88300

(8) h3-5/h3-1 = 0.533

(9) f3/f3-1 = -0.843, f3=2.981

The respective values in the numerical value embodiments of the zoom lens 3 according to the third preferred embodiment are presented in Table 7.

Please replace the paragraph starting on page 36, line 14 through page 37, line 7, in its entirety with the following new paragraph.

Next, the values of the respective conditional expressions (1) through (5), (11) and (12) in the above numerical value embodiments of the zoom lens 3 are shown in the following.

(1) h1-[[1]]4/h1-[[4]]1 = 1.400

(2) d1-2/d1-3 = 0.228

(3) n1-2 = 1.835

(4) H1'/f1 = 0.265

(5) (n2-1+n2-2)/2 = 1.828

(11) n4-2 = 1.847

(12) f3/f4 = 0.65

The respective values in the numerical value embodiments of the zoom lens 4 according to the fourth preferred embodiment are presented in Table 10.

Please replace the paragraph starting on page 40, line 14 through page 41, line 12, in its entirety with the following new paragraph.

Next, the values of the respective conditional expressions (1) through (5), (9), (11) and (13) in the above numerical value embodiments of the zoom lens 4 are shown in the following.

(1) h1-[[1]]4/h1-[[4]]1 = 1.400

(2) d1-2/d1-3 = 0.393

(3) n1-2 = 1.835

(4) H1'/f1 = 0.277

(5) (n2-1+n2-2)/2 = 1.803

(9) h3-5/h3-1 = 0.771

(11) n4-2 = 1.805

(13) f3/f3-1 = 1.261

All of the shapes and numerical values of the respective parts illustrated in the above-mentioned preferred embodiments are shown merely by way of example of implementation performed when putting the present invention into practice, and the technical scope of the present invention should not be interpreted restrictively by these.

Please replace the paragraph starting on page 41, line 13 through page 42, line 15, in its entirety with the following new paragraph.

As apparent from the foregoing description, a zoom lens of the present invention (1) made up of a first lens group having positive refracting power, a second lens group having negative refracting power, a third lens group having positive refracting power, and a fourth lens group having positive refracting power, which are disposed in order from an object side, wherein the first lens group and the third lens group are stationary, and the zoom lens performs mainly variable power by shifting the second lens group in an optical axis direction, and performs correction for image position fluctuations and focusing by shifting the fourth lens group in the optical axis direction, is characterized by that the first lens group is composed of five lenses: a concave lens; a convex lens with a strong convexity facing to an image side; a cemented lens made up of a concave lens with a strong concavity facing to the image side and a convex lens; and a convex lens with a strong convexity facing to the object side, which are disposed in order from the object side, and configured so as to satisfy the following conditional expressions: (1) $1.25 < h1\text{-}[[1]]\underline{4}/h1\text{-}[[4]]\underline{1} < 1.55$; (2) $d1\text{-}2/d1\text{-}3 < 0.4$; (3) $1.65 < n1\text{-}2$; and (4) $0.1 < H1'/f1 < 0.6$, where f1 is a focal length of the first lens group; h1-i is a paraxial ray height in the i-th surface from the object side when allowing a paraxial ray parallel to an optical axis to enter the first lens group; d1-i is axial spacing from the i-th surface to the (i+1)-th surface in the first lens group; n1-i is a refractive index on a d-line of the i-th lens in the first lens group; and H1' is spacing from a vertex of a surface closest to the image side in the first lens group to a principal point on the image side in the first lens group ("-" indicates the object side, and "+" indicates the image side).

Please replace the paragraph starting on page 46, line 10 through page 47, line 21, in its entirety with the following new paragraph.

An image pickup apparatus of the present invention comprises: a zoom lens; image pickup means converting an image captured by the zoom lens into an electric image signal; and image control means. The image control means is configured so as to form a new image signal subjected to coordinate conversion by shifting a point on an image defined by an image signal formed by the image pickup means, while referring to a conversion coordinate factor previously provided in response to a variable power rate through the zoom lens, and output the new image signal. The zoom lens is made up of a first lens group having positive refracting power, a second lens group having negative refracting power, a third lens group having positive refracting power, and a fourth lens group having positive refracting power, which are disposed in order from an object side. The first lens group and the third lens group are stationary, and the zoom lens performs mainly variable power by shifting the second lens group in an optical axis direction, and performs correction for image position fluctuations and focusing by shifting the fourth lens group in the optical axis direction. The first lens group is composed of five lenses: a concave lens; a convex lens with a strong convexity facing to an image side; a cemented lens made up of a concave lens with a strong concavity facing to the image side, and a convex lens; and a convex lens with a strong convexity facing to the object side, which are disposed in order from the object side. These are characterized by arranging so as to satisfy the following respective conditional expressions: (1) 1.25 < h1-[[1]]<u>4</u>/h1-[[4]]<u>1</u> < 1.55; (2) d1-2/d1-3 < 0.4; (3) 1.65 < n1-2; and (4) 0.1 < H1'/f1 < 0.6, where f1 is a focal length of the first lens group; h1-i is a paraxial ray height in the i-th surface from the object side when allowing a paraxial ray parallel to an optical axis to enter the first lens group; d1-i is axial spacing from the i-th surface to the (i+1)-th surface in the first lens group; n1-i is a refractive index on [[a-d line]] <u>a d-line</u> of the i-th surface in the first lens group; and H1' is spacing from a vertex of a surface closest to the image side in the first lens group to a

principal point on the image side in the first lens group ("-" indicates the object side, and "+" indicates the image side).

Please replace the Abstract on page 67, in its entirety with the following new Abstract.